

THE GROUNDWATER SENTINEL

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Bottled Water Backlash: Towns Turn Back to Tap

In light of reports on the environmental effects of bottled water, cities, counties, and states throughout the U.S. have begun publicizing their public water systems while phasing out or banning the purchases of water in polyethylene terephthalate (PET) plastic bottles. Reasons for the rejection of bottled water include the environmental costs of manufacturing enough plastic to meet the demand (estimated at 29 billion containers in 2007), the economic costs of handling the resulting trash (only 14% of plastic containers are recycled, nationwide), and the direct cost of purchasing the product itself, generally selling at prices 1,000 or more times higher than tap water. San Francisco estimates saving up to \$500,000 annually after directing city departments not to buy any more.

The backlash has been both internal and external to government as well, with the Chicago City Council imposing a 5¢ landmark tax on bottles of water to discourage consumption generally and thus reduce the waste stream. Cook County and the State of Illinois followed suit with bans on their own purchases. Cities around the world have taken to supporting a "back to tap" message, either by joining existing campaigns like Corporate Accountability International's "Think Outside the Bottle" effort (Boston, Minneapolis) or conducting their own efforts, handing out refillable carafes and containers to get their residents turned on to tap water (Toronto, Paris). Tap water advocates point to the low price and the high standards of quality to which municipal water is held, well above the monitoring of bottled water, which is borne out in lab testing by the US EPA and non-governmental environmental groups showing great variability in the purity of bottled water brands.

Within the watershed, a local group in Chatham Township, NJ, is tackling the bottled water issue



Reusable containers are being offered in place of disposable plastic by municipalities and concerned citizens groups like Back₂Tap

through education and sales of safe, reusable stainless steel containers. Back₂Tap, organized by three concerned mothers, is aiming its campaign at the local schools, offering bottles customized with school logos and sports team nicknames. (See photo, above, and visit www.back2tap.org for more information.)

The demand for bottled water continues to grow, despite these public rejections, increasing 7% in 2007 in the U.S., to an average of 29.8 gallons per person per year, for a total of 9 billion gallons. Bottled water is now the second largest beverage purchase, ahead of beer, coffee, milk, fruit drinks, and tea. Only soda remains larger, and sales of carbonated beverages have been flat for over a decade. Estimates of the energy costs of producing the PET plastic alone come to 17 million barrels of oil, enough to provide fuel for a year for a million automobiles. Adding in costs for transportation, refrigeration, and disposal pushes the estimate to 50 million barrels. And the water demand in PET manufacture means that for each 1-liter container produced, 3 liters of water are used. It takes more water to make than to fill the typical bottle of water.

What effects is the bottled water phenomenon having on groundwater? While no definitive connections have been shown between even the largest extractions for bottled water and drops in aquifer levels or stream flows, many jurisdictions are adopting more stringent reviews of groundwater allocation permitting to prevent such deleterious effects from occurring unwittingly. In Maine, home of the Poland Spring brand, America's third largest seller and biggest spring-water bottler, severe local opposition to siting new plants led the state legislature to revise the rules for commercial water extraction last June. Driven by a number of factors, including a high-profile case of MTBE well contamination, the

new water bills are an attempt to enforce uniform standards on surface and groundwater allocations alike and to offer more thorough public review of permits. Impacts of permitted allocations must be reviewed on a watershed basis and sustainability standards for groundwater withdrawals must be met. Despite these new protections, a number of Maine towns are considering bans or moratoria on well permits and plant expansions that have been proposed. A citizens' initiative groundwater bill, establishing a Freshwater Resource Board and giving priority to "traditional" (on-site) uses, is being circulated for inclusion on the November 2009 ballot.

Well Contamination Settlement Reached; MTBE Polluters to Pay

As a result of a settlement in a class-action lawsuit against producers of methyl tertiary butyl ether (MTBE), a gasoline additive that readily contaminates groundwater, dozens of New Jersey water suppliers will share in the largest compensation payment for drinking water pollution yet agreed upon. As one of 19 states in a consolidated lawsuit brought against a plethora of petroleum producers, New Jersey's share comes to \$67 million out of the total of \$422 million offered. Settlement figures for individual awards can range as high as \$15 million for the city of Vineland (\$10 million after legal costs and fees are deducted).

First introduced as a winter-time oxygenating agent added to gasoline in 1979 to help keep auto emissions low in cold-weather conditions, MTBE was detected in wells in Rockaway Township (Morris County), NJ, by 1980. Deemed a possible carcinogen, MTBE is now the most commonly detected volatile organic chemical (VOC) found in NJ

groundwater. As many as 15% of NJ's wells have detectable levels of MTBE, though levels above NJDEP's safe limit of 70 parts-per-billion (ppb) are fairly rare. Contaminated wells are fitted with air strippers to remove the VOCs, and part of the settlement will be used to reimburse water utilities for the cost of installing strippers and to cover the cost of their operation.

The initial NJ lawsuit was filed quickly in 2003, in response to rumors of a potential Congressional action that would have relieved petroleum producers of liability for MTBE contamination. As a result, the present settlement may have left out NJ water utilities and communities which have legitimate claims.

And the settlement has not resolved the lawsuit, as a few of the producers, including the largest petroleum refiners in America, have refused to participate, instead preferring to have the issue resolved by the New York Federal District court that is hearing the consolidated litigation.



Leaking service station tanks are the principal source of MTBE pollution



For more information on groundwater topics, educational materials ("The Groundwater Adventures of Walter Wet"), and past issues of the SENTINEL, please visit our Web site, www.passaicriver.org.

The GroundWater Protection Committee
Hon. Richard Plambeck, Chairman
94 Mt. Bethel Road, Warren, NJ 07059
Phone: 908-222-0315
E-mail: prc@passaicriver.org
Web site: www.passaicriver.org